SEE PATENT No. 2,732,099
222/203
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STOP the hazardous job of poking material from atop the bin.

STOP punishing bins and hoppers with sledge-hammer blows.

STOP STOPPAGE

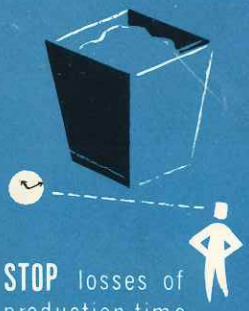
with

Pneu Bin

pulsating panels

STOP the difficulties and delays of prodding through the discharge.

STOP bin damage and repairs resulting from too much vibration.



STOP losses of production time due to interrupted or uneven flow.

STOP worker fatigue caused by the racking noise of vibrators.

U. S. PATENT OFFICE
MAY 22 1953
DIV. X 35 PAPER NO.

...the only device that feeds stubborn materials uniformly, noiselessly from bins and hoppers by **POSITIVE DISPLACEMENT**

what PneuBin is

PneuBin, manufactured by Gerotor May Corporation, is the original and only bin-feeding device of its kind. Newly developed, it has already proved the superior solution to a common and costly industrial problem—restricted, interrupted or irregular flow from bins and hoppers. In hundreds of installations throughout the country, PneuBin has quickly demonstrated its ability to feed even the most difficult materials successfully. In fact, PneuBin's performance has been most impressive where the usual types of auxiliary feeders have failed to do the job.

The active part of a PneuBin installation (see diagram at right) is the pulsating PneuBin Panel. This consists of a reinforced, abrasive-resisting, flexible diaphragm of a special neoprene compound produced by the B. F. Goodrich Company. This diaphragm is permanently Vulcalock-bonded to the back of a specially fabricated steel plate. Air is alternately admitted and exhausted between the plate and the diaphragm, causing the latter to pulsate.

The PneuBin Air Control automatically controls the flow of air in and out of the Panels. This unique device permits a wide selection of frequency, force and amplitude of pulsation. Since PneuBin working pressures are very low, usually under 8 p.s.i., only a modest demand is made on the regular plant air supply.

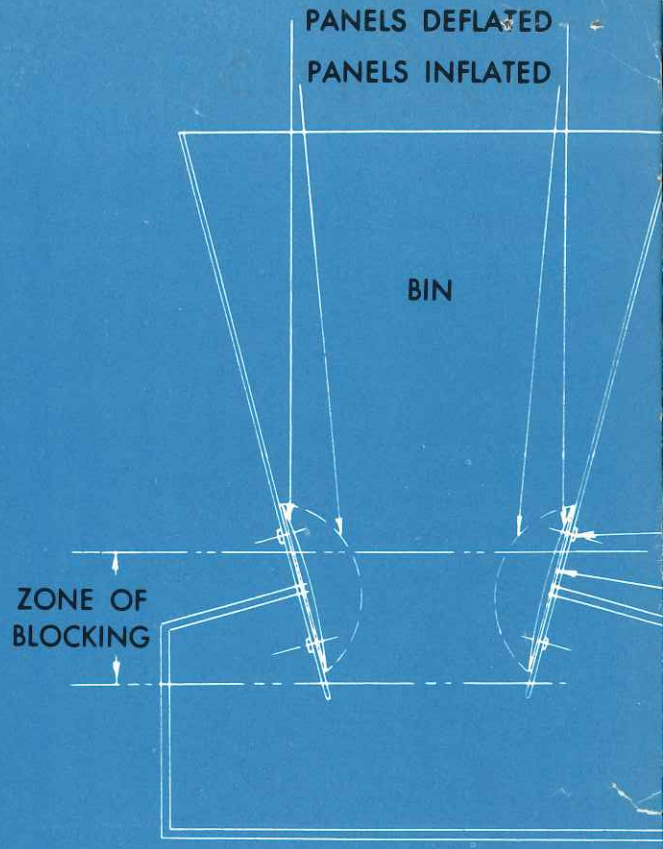
what PneuBin does

Where arching is a problem, each expansion of the PneuBin Panels constricts the arched section. As the Panels deflate, the arch is left unsupported and falls. This continuous motion actually collapses arches as fast as they attempt to form.

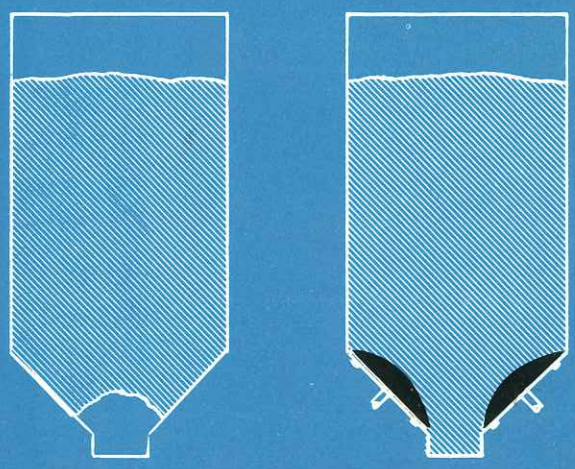
Panel pulsation also makes it impossible for material to hang-up on bin sides, or funnel.

Where extremely high-viscosity or clay-like materials will not flow, one or more PneuBin Panels of appropriate size, strategically placed on the inside of the bin or hopper walls, will positively expel a portion of the contents with each pulsation.

PneuBin, combined with proper hopper design, can master virtually any material-moving job.

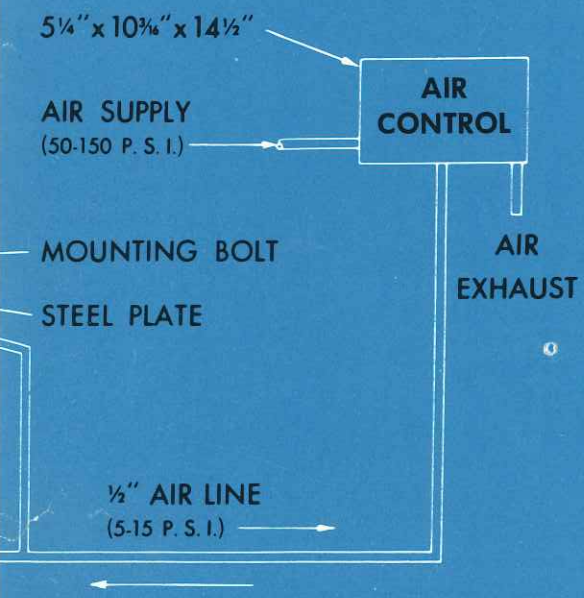


prevents arching

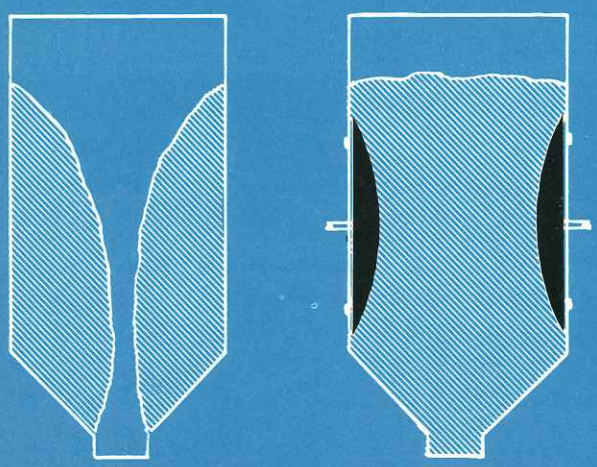


Without PneuBin, a tightly-packed arch often forms where bin walls converge over the discharge aperture or auger-type feeding device. PneuBin prevents this condition by keeping material in motion, thus collapsing arches as fast as they attempt to form.

typical installation



prevents funneling



Without PneuBin, materials often tend to hang-up on the sides of bins and hoppers, creating an empty "funnel" through the center. PneuBin corrects this type of flow stoppage through the continual pulsation of strip panels mounted vertically on the walls.

only PneuBin offers all these features

performance—PneuBin is highly efficient—the only device producing positive, large-amplitude movement of bin contents and positive extrusion where necessary. Successfully feeds such notoriously difficult materials as: finely ground cork (with binder), wood pulps and wood flours, cereals, core and foundry sands, high-viscosity or clay-like substances, ferrous sulphate (copperas), shredded cellulose acetate, wet detergent powders, paint pigments, raw and pulverized coal (high moisture content) and the full range of chemical salts.

freedom from noise—PneuBin is quiet—eliminates personnel objections and worker fatigue due to the din of vibrators.

bin protection—Ends costly repair and replacement of battered or fatigue-cracked bin walls. PneuBin is powerful but gentle—acts on the bin contents, not on the bin.

ease of installation—PneuBin can be quickly and easily installed by any competent maintenance man, with no special knowledge or tools.

economy—PneuBin installations are reasonably priced, and extremely economical to operate. Air consumption per sq. ft. of panel area approximates only one cu. ft. per minute at 5 p.s.i.

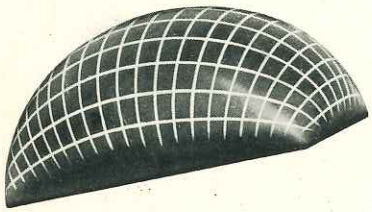
dependability—PneuBins have operated without attention through many years and millions of cycles of continuous service. The neoprene compound in PneuBin Panels is a tough, abrasive-resisting material capable of outlasting steel; it is highly resistant to oils and many solvents.

control—Rate, amplitude and force of pulsation are easily regulated through a wide range by a simple adjustment of the PneuBin Air Control. Where necessary, Panels can be inflated in sequence rather than simultaneously, through use of a special control.

safety and cleanliness—PneuBin eliminates the dangerous job of poking down material from above. No dust from open bin tops. No free air to cause dust, moisture or contamination.

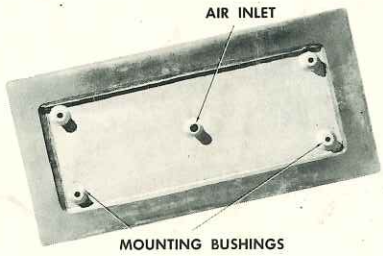
engineered results—The number, size and location of PneuBin Panels are the result of a careful engineering study of your particular problems. This insures your getting maximum satisfaction from your investment.

FRONT VIEW OF PneuBin PANEL



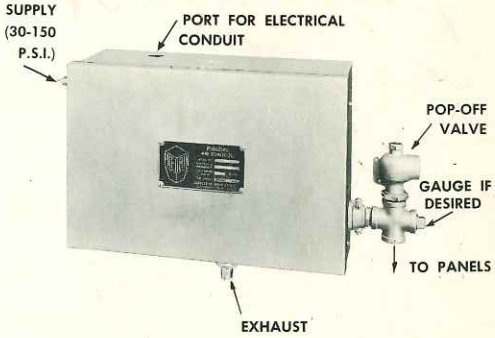
Illustrated is a 12" x 24" Panel inflated to 14 p.s.i. This diaphragm, of specially compounded neoprene, is alternately inflated and deflated to produce positive movement of bin contents.

BACK VIEW OF PneuBin PANEL



This photograph shows how the neoprene diaphragm is Vulcalock-bonded to the back of the steel plate, which is easily fastened to the inside of the bin or hopper wall with mounting bolts.

PneuBin AIR CONTROL



This compact steel cabinet houses all necessary controls to regulate the rate, force and amplitude of pulsation of 3 to 20 Panels, depending on their size. 110V-60C standard; specials where required.

PneuBin users include these industrial leaders

American Smelting & Refining
American Sugar Refining
Anaconda Copper Mining
Armstrong Cork
Colgate-Palmolive-Peet
Dow Chemical
E. I. DuPont de Nemours
General Mills
General Motors, A-C Spark Plug Div.
International Smelting & Refining
Kaiser Aluminum & Chemical
Lehigh Portland Cement
Lever Brothers
National Lead
Pittsburgh Plate Glass
Toledo Edison

Pneubin is applicable to all types of bins and hoppers...conical, pyramidal or cylindrical...wood, steel or concrete

PneuBin is applicable to **your** material-feeding problem—anything from soap to salt, from cork to coal, from coarse lumps to micron fineness—weighing from 2 to 200 lbs. per cu. ft.—at temperatures up to 135° F. An example of PneuBin's power: one 24" x 72" panel at 5 p.s.i. exerts a total force in excess of 4 tons and displaces over 8 cu. ft. of material with each pulsation.

SIZES—PneuBin Panels are available in ten standard sizes, 3" to 24" wide, 6" to 72" long, with amplitudes up to 12". Special sizes can be made if required in quantity.

PneuBin is the answer to your present problem—your future problems, too. If you are planning new construction, take advantage of our experience with bin and hopper design. Proper basic design, in combination with PneuBin, will feed any material we have ever encountered—bar none.

Send us a print or sketch of your bin, telling us what the material is and showing us where it hangs up. PneuBin engineers will gladly make recommendations, with no obligation on your part.

PneuBin

manufactured by **GEROTOR MAY CORPORATION**

BALTIMORE 3, MARYLAND, U. S. A.